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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WRIGHT, ANDREW D

ART UNIT PAPER NUMBER

3617

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,991

Applicant(s)

KRASON ET AL.

Examiner

Andrew Wright

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The submission of the information disclosure statement (IDS) on 7/20/04 was in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. It is noted that the inventor of US Patent 5,627,637 is Kapteyn, not Baker (as listed on the IDS).

Claim Objections

2. Claim 23 is objected to because it recites the limitation "the gas" in lines 6 and 11. There is insufficient antecedent basis for this limitation in the claim. It will be assumed that this refers to the "natural gas" recited in the preamble. Consistent terminology should be used throughout the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 15-22 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

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had possession of the claimed invention. Claim 15 recites "a plurality of tanks permanently attached to the ship". The recitation of permanent attachment is not supported by the original disclosure. Claim 15 recites "a heating system integral to the tank"; "a cooling system integral to the tank"; and "[a] perforated pipeline system integral to the tank". The recitations of integral to the tank is not supported by the original disclosure. Claims 16-22 depend from claim 15.

5. Claim 26 recites "admitting the gaseous hydrocarbon fuel alone to the storage vessel at a superatmospheric pressure". This is not supported by the original disclosure.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 26 is replete with recitations that lack antecedent basis in the claims. Examples include: "the storage vessel"; "the admitted gas"; "the adsorbent bed"; "the gaseous hydrocarbon fuel"; and "the adsorbed gases". These recitations are unclear even when read in light of the specification. This renders the claim indefinite.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et al. (US 4,523,548) in view of Zalejski (US 3,320,918). Engel shows a car with tanks (214, 224). The tanks carry compressed gas. A zeolite material is in each of the tanks (column 10, lines 46-64). The zeolite material is adapted for adsorption and desorption of the gas. Plumbing lines and valves are the connecting means. The manifold (244) is the source for receiving and dispensing the gas. Engel does not teach that the tanks are aboard a ship. It is well known and common for cars to be loaded upon ships for the purpose of ferrying the cars. Zalejski shows a ferry boat that carries cars. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the Engel car on a ferry as taught by Zalejski. The motivation would be to ferry the car from one location to another.

11. Neither the claims nor the specification of the instant application give any context to the terms "appropriately" and "high". Engel teaches that the zeolite can be granulated particles. Therefore it is grained. The zeolite will necessarily have some degree of porosity and cation exchange.

12. Engel teaches that the gas is natural gas (column 5, line 66).

13. The modified invention of Engel in view of Zalejski constitutes a method for transporting natural gas aboard a ship. The natural gas is in the car. The car is transported on the ship. Therefore, the natural gas is transported upon the ship. The step of providing the tanks is inherent in driving the car onto the ship. The step of putting the zeolite in the tanks is inherent in the constructing the car with tanks (214) with zeolite material therein. The car must be periodically supplied with natural gas to use as fuel. Therefore, the tanks are periodically refilled with natural gas. The steps of connecting gas delivery tubes to the tanks, introducing gas into the tanks, and disconnecting the gas delivery tubes are inherent in the normal re-filling of the tanks. The step of allowing the ship to embark to its destination is inherent in the ferry function of the ship. The step of connecting delivery tubes to the tanks and discharging gas from the tanks is inherent in driving the car off the ferry when it reaches its destination. The opening of the manifold to allow the gas to flow from the tank to the engine is the step of connecting gas delivery tubes. Gas is then discharged from the tanks when the engine is run and the gas used for fuel. It is noted that the claimed method steps are not exclusive and are not recited as order-specific. Therefore, the making of the Engle car and the subsequent use on a ferry boat comprise the recited method steps. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to devise the recited method steps. The motivation would be to make and use the Engle car with the Zalejski ferry.
14. Regarding claim 24, Engle discloses graining, modifying, dehumidifying, and sieving the zeolite material before it is put into the tanks (columns 10-11).

15. Regarding claim 25, Engle teaches that the maximum pressure of the stored gas is in the range of 100 psig to 400 psig, which is no greater than 500 psi.

Response to Arguments

16. Applicant's arguments with respect to claims 15-26 have been considered but are moot in view of the new ground(s) of rejection. It is noted that claims 11 and 12 were cancelled and rewritten, without any changes, as claims 23 and 24. It is further noted that no argument has been put forth regarding the rejection of claims 11 and 12. Therefore, the same rejection has been used for claims 23 and 24 as was used for claims 11 and 12.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew D. Wright
Patent Examiner
Art Unit 3617

AW 9-27-04
ANDREW D. WRIGHT
PRIMARY EXAMINER